



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,959	05/16/2005	Takao Seki	10873.1656USWO	1859
53148	7590	03/09/2007	EXAMINER	
HAMRE, SCHUMANN, MUELLER & LARSON P.C. P.O. BOX 2902-0902 MINNEAPOLIS, MN 55402			LARYEA, LAWRENCE N	
		ART UNIT		PAPER NUMBER
				3768
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	03/09/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/534,959	SEKI ET AL.
	Examiner Lawrence N. Laryea	Art Unit 3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-7 and 9 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>05/16/05 07/18/05</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Specification

1. Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.
2. Claim 9 does not pass the test for a proper dependent claim because dependent claim 9 does not necessarily include every limitation of the parent claims. Therefore, the dependent claim could conceivably be infringe on claims 1,5 or 6.

See *Ex parte Porter*, 25 USPQ2D 1144.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 and 6-7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by **Basoglu et al (Patent 5910117)**.
5. Re claims 1-2 and 9, **Basoglu et al** teach an ultrasonic Doppler blood flow measurement device comprising an ultrasonic wave send/receive section that sends ultrasonic pulses into an object to be examined and receives ultrasonic pulse echoes that are reflected from inside the object (**See Col. 6, line 59-62 and Fig.1**); a phase detection section (**See Fig.1, 18**) that detects components that have undergone Doppler

transition from among the ultrasound pulse echoes and takes these as detection signals; a first memory section (**See Col. 6, line 65-67 and Col. 5, line 9-13**) that is constituted by a memory that has a two-dimensional address space and different data read/write speeds (**See Col.4 , line 53-54**) in a row direction and a column direction of the address space(**See Fig. 14**) and stores the detection signals; a blood flow information computation section (**See Col.7 , line 10-26**) that calculates blood flow information from the detection signals; a second memory section (**See Col.4 , line 53-54**) that is constituted by a memory that has a capacity that is smaller than that of the first memory section but is at least the capacity of a data amount required for the blood flow information computation section to compute any one depth point of the object, and that stores the detection signals used for the computation by the blood flow information computation section(**134**) and a data transfer section that performs data transfer from the first memory section to the second memory section in only the direction (**Col. 5, line 2-4 and Col. 15, line 31-45**) of the row direction and the column direction of the address space of the first memory section, that has the faster data read/write speed(**See Figures 13-15 and Figures 2 and 3 where all the device are configured to be operated by a program**).

6. Further Re claim 2, **Basoglu et al** teach that it is known in art to use transmitted points acquired within the body to analyze blood flow measurements (**See Col.2, line 4-15 and Col.4, line 41-44**).

7. Re claim 4, **Basoglu et al** teach an ultrasonic Doppler blood flow measurement device wherein the second memory section is constituted by a SRAM (See Col.2, line 4-15 and Col.4, line 41-44).

8. Re Claims 6 and 7, **Basoglu et al** teach an ultrasonic Doppler blood flow measurement device wherein the blood flow information computation section and the data transfer section are constituted by separate computation processing circuits; and wherein each computation processing circuit has a direct memory access function with respect to the second memory section, and the operations of the blood flow information computation section and the data transfer section are controlled by a program (See Figures 1-3 and Col.7, line 15-24).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Basoglu et al** in view of **Finger et al (Patent 6262749)**.

Basoglu et al disclose an ultrasonic Doppler blood flow measurement device comprising an ultrasonic wave send/receive section, phase detection section, a first memory section, a second memory section, computation section, and a data transfer

section for measuring blood flow with the body but does not expressly disclose the second memory section is constituted by a DRAM or a SDRAM.

Finger et al disclose ultrasonic system wherein a memory is constituted by a DRAM or a SDRAM (**See Col.7, line 6-14 and Abstract, line 14-17**).

It would have been obvious to one having ordinary skill in the art at the time invention was made to modify the ultrasonic Doppler blood flow measurement device of **Basoglu et al** where a second memory section is constituted by a DRAM or a SDRAM similar to that of **Finger et al** so it can react as quickly as possible to changes in control inputs during measuring and transferring of data.

11. Re claim 5: **Basoglu et al** teach an ultrasonic Doppler blood flow measurement device wherein the first memory section could be provided as an external memory (**See Col.8, line 46-48**) but does not expressly disclose computation section, the second memory section and the data transfer section are mounted on a single hardware unit.

Finger et al disclose ultrasonic system where the computation section (CPU), the memory section and the data transfer section are mounted on a single hardware unit (**See Col.5, line 42-45**).

It would have been obvious to one having ordinary skill in the art at the time invention was made to modify the ultrasonic Doppler blood flow measurement device of **Basoglu et al** where the computation section, the second memory section and the data transfer section are mounted on a single hardware unit similar to that of **Finger et al** so that they can share and transfer information very easily using the same mother board.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence N. Laryea whose telephone number is 571-272-9060. The examiner can normally be reached on 9:30 a.m.-5:30 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni Mantis-Mercader can be reached on 571-272-4740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LNL

Eleni Mantis Mercader
ELENI MANTIS MERCADER
SUPERVISORY PATENT EXAMINER